Patent Claims

What is claimed is:

1. An annular gap seal (20) for a valve (1), using which the flow of a fluid from a high-pressure side (37) to a low-pressure side (38) of the valve (1) may be blocked in a blocked position, the valve (1) having a cylinder (9) which the fluid may flow through and in which a piston (12) is axially displaceable, and an annular gap (19) between the piston (12) and the cylinder (9) being sealable in the blocked position using the annular gap seal (20), which lies in a peripheral groove (21) of the cylinder (9), characterized by two sealing rings (24, 25) positioned mirror-symmetrically next to one another in the groove (21), a sealing lip (27) of a first sealing ring (24, 25) facing toward the low-pressure side (38) being able to be pressed fluid-tight against the piston (12) and a sealing surface (29) of the first sealing ring (24, 25) being able to be pressed fluid-tight against a groove wall (30) by the fluid from the high-pressure side (37) in the blocked position.

2. The annular gap seal (20) according to the preceding claim,
characterized in that, in the blocked position, a sealing shoulder (31) of the first sealing ring (24, 25) facing toward the low-pressure side (38) may be pressed fluid-tight against a peripheral lug (32), which projects axially into the groove (21), by the fluid from the high-pressure side (37).

3. The annular gap seal (20) according to one of the preceding claims,
characterized in that the sealing rings (24, 25) have a C-profile (28) and the C-profile (28) of the first sealing ring (24, 25) facing toward the low-pressure side (38) is expandable in the blocked position by the fluid from the high-pressure side (37).

4. The annular gap seal (20) according to one of the preceding claims,
characterized by oversized dimensions in relation to the distance between piston (12) and groove base (34), so that the annular gap seal (20) may be laid in the groove (21) with pre-tension.

5. The annular gap seal (20) according to one of the preceding claims,
characterized by the stabilizing element (26) which may be laid in the direction of the groove (21) with the sealing rings (24, 25).

6. The annular gap seal (20) according to the preceding claim,
characterized in that the stabilizing element (26) is a coiled spring which may be inserted in a torus shape.

7. The annular gap seal (20) according to Claim 5,
characterized in that the sealing rings (24, 25) may be pre-tensioned radially in the direction of the piston (12) using the stabilizing element (26).